



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,115	06/14/2001	Michael Lynn Hinds	15745-US	7919

7590

01/09/2003

Jimmie R. Oaks
Patent Department
DEERE & COMPANY
One John Deere Place
Moline, IL 61265-8098

EXAMINER

PANG, ROGER L

ART UNIT

PAPER NUMBER

3681

DATE MAILED: 01/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,115

Applicant(s)

HINDS, MICHAEL LYNN

Examiner

Roger L Pang

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9-12 is/are rejected.
- 7) ☒ Claim(s) 5-8, and 13-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The following action is in response to the amendment filed for application 09/881,115 on November 21, 2002.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsuya.

With regard to claim 1, Applicant has disclosed a gearbox containing gearing and having a low section having a bottom wall, a rotatable drive shaft extending through said bottom wall, and being coupled to said gearing, and a seal located for preventing oil from leaking along an interface including a surface section of the shaft where it enters said bottom wall of the gearbox as prior art (Jepson claim), but lacks the teaching of a contaminant collector. Mitsuya teaches a contaminant collector having magnetic characteristics (Fig. 2) being mounted in a box 1 in a location closely adjacent a top surface of a seal 5 so as to intercept and collect ferric contaminants before they engage the seal. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the gearbox to employ a contaminant collector in view of Mitsuya in order to reduce wear. With regard to claim 9, Applicant has disclosed a sugar cane base cutter assembly including a gearbox provided with an upper, horizontal section extending between and joining a pair of depending wells, each well having a bottom wall, and upper drive shaft section of a base cutter leg being rotatably mounted in each bottom wall and a

Art Unit: 3681

seal being located on each shaft section at an associated bottom wall for preventing leakage of oil from said gearbox along the shaft section as prior art (Jepson claim), but lacks the teaching of a contaminant collector. Mitsuya teaches a contaminant collector having a magnetic characteristic (Fig. 2) being mounted above and closely adjacent seals 5 so as to intercept ferric contaminants settling towards the associated seal. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the gearbox to employ a contaminant collector in view of Mitsuya in order to reduce wear.

Claims 1-2 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauser. With regard to claim 1, Applicant has disclosed a gearbox containing gearing and having a low section having a bottom wall, a rotatable drive shaft extending through said bottom wall, and being coupled to said gearing, and a seal located for preventing oil from leaking along an interface including a surface section of the shaft where it enters said bottom all of the gearbox as prior art (Jepson claim), but lacks the teaching of a contaminant collector. Hauser teaches a contaminant collector 55 having magnetic characteristics being mounted in a gearbox in a location closely adjacent a top surface of said box so as to intercept and collect ferric contaminants before they engage the seal (at wall of gearbox; Col. 7, lines 9-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the gearbox to employ a contaminant collector in view of Hauser in order to reduce wear. With regard to claim 2, Hauser teaches the gearbox wherein said contaminant collector is mounted for rotation with said shaft (Col. 7, lines 7-8). With regard to claim 9, Applicant has disclosed a sugar cane base cutter assembly including a gearbox provided with an upper, horizontal section extending between and joining a pair of depending wells, each well having a bottom wall, and upper drive

shaft section of a base cutter leg being rotatably mounted in each bottom wall and a seal being located on each shaft section at an associated bottom wall for preventing leakage of oil from said gearbox along the shaft section as prior art (Jepson claim), but lacks the teaching of a contaminant collector. Hauser teaches a contaminant collector 55 having a magnetic characteristic being mounted above and closely adjacent seals (at the wall of gearbox) so as to intercept ferric contaminants settling towards the associated seal (Col. 7, lines 9-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the gearbox to employ a contaminant collector in view of Hauser in order to reduce wear. With regard to claim 10, Hauser teaches the assembly wherein each of said contaminant collectors is mounted for rotation with an associated one of the shaft sections (Col. 7, lines 7-8).

Claims 3-4 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauser in further view of Van De Venne. With regard to claim 3, Hauser teaches the gearbox wherein said contaminant collector includes a ring fixed to said shaft via any conventional method, but lacks the specific teaching of said ring being press fit onto said shaft. Van De Venne teaches a ring 9 that is fixed to a shaft 11 via press fit (Col. 2, line 35). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hauser to employ a press fit in view of Van De Venne, since a press fit is a known conventional attachment method. With regard to claim 4, Hauser teaches the gearbox, wherein said magnetic characteristic is achieved by there being at least one magnetic component fixed as an integral part to an upper surface of said ring (the top of the magnet that is integral with the whole magnet). With regard to claim 11, Hauser teaches the assembly wherein said contaminant collector includes a ring fixed to said shaft via any conventional method, but lacks the specific

Art Unit: 3681

teaching of said ring being press fit onto said shaft. Van De Venne teaches a ring 9 that is fixed to a shaft 11 via press fit (Col. 2, line 35). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hauser to employ a press fit in view of Van De Venne, since a press fit is a known conventional attachment method. With regard to claim 12, Hauser teaches the assembly wherein said magnetic characteristic of each contaminant collector is achieved by at least one magnet being fixed to each ring (i.e. the surface of the magnet being an integral part fixed to the ring).

Allowable Subject Matter

Claims 5-8 and 13-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

FACSIMILE TRANSMISSION

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is (703) 305-3597. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete

Art Unit: 3681

list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (703) 305-3597) on _____ (Date)

Typed or printed name of person signing this certificate:

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the

Art Unit: 3681

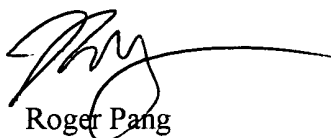
processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roger L Pang whose telephone number is 703-305-0445. The examiner can normally be reached on 5:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on 703-308-0830. The fax phone numbers for the organization where this application or proceeding is assigned are 705-305-3597 for regular communications and 705-305-3597 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.

RLP
January 8, 2003



Roger Pang